

Antimicrobial Activity and Phytochemicals Screening of JoJoba (*Simmondsia chinensis*) Root Extracts and Latex

Authors : Ferial M. Abu-Salem, Hayam M. Ibrahim

Abstract : Abstract– Plants are rich sources of bioactive compounds. In this study the photochemical screening of hexane, ethanolic and aqueous extracts of roots and latex of jojoba (*Simmondsia chinensis*) plant revealed the presence of saponins, tannins, alkaloids, steroids and glycosides. Ethanolic extract was found to be richer in these metabolites than hexane, aqueous extracts and latex. The extracts and latex displayed effective antimicrobial activity against *Salmonella typhimurium*, *Bacillus cereus*, *Clostridium perfringens*, *Staphylococcus aureus*, *Escherichia coli*, *Candida albicans* and *Aspergillus flavus*. The increase in volume of the extracts and latex caused more activity, as shown by zones of inhibition. *Candida albicans* growth was inhibited only by hexane extract. Jojoba latex was not effective against *Candida albicans* at 0.1 and 0.5 ml extracts concentration but showed 5mm zone of inhibition at (1.0 ml). Lower volume (0.1ml) of latex encouraged *Aspergillus flavus* growth, while at (1.00 ml) reduced its mycelial growth. Thus, jojoba root extracts and latex can be of potential natural antimicrobial agents.

Keywords : Antimicrobial activity, Jojoba (*Simmondsia chinensis*), latex, photochemical, root Extracts.

Conference Title : ICEP 2014 : International Conference on Electronic Publications

Conference Location : journal city, WASET

Conference Dates : November 23-23, 2014